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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,332	08/08/2001	John Charles DeBraal	0011-0377P	1960
2292	7590	04/13/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			BRUENJES, CHRISTOPHER P	
			ART UNIT	PAPER NUMBER

1772

DATE MAILED: 04/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 09/923,332	Applicant(s) DEBRAAL ET AL.	
	Examiner Christopher P Bruenjes	Art Unit 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-10,17-21 and 23-27 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-3,5-10,17-21 and 23-27 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

WITHDRAWN REJECTIONS

1. The 35 U.S.C. 102 rejections of claims 1-3 and 25 as anticipated by Fumel et al of record in the Office Action mailed December 1, 2003, Pages 3-4 Paragraph 5, have been withdrawn due to Applicant's amendments in the Paper filed March 1, 2004.

2. The 35 U.S.C. 103 rejection of claim 7 over Fumel et al of record in the Office Action mailed December 1, 2003, Pages 7-8 Paragraph 7, has been withdrawn due to applicant's amendments in the Paper filed March 1, 2004.

REPEATED REJECTIONS

3. The 35 U.S.C. 103 rejections of claims 5-6, 8-9, and 26 over Fumel in view of Geddes are repeated for the reasons previously of record in the Office Action mailed December 1, 2003, Pages 5-7 Paragraph 6.

4. The 35 U.S.C. 103 rejection of claim 10 over Fumel in view of Geddes is repeated for the reasons previously of record in the Office Action mailed December 1, 2003, Pages 8-9 Paragraph 8.

5. The 35 U.S.C. 103 rejections of claims 17-19 and 27 over Fumel in view of Neale are repeated for the reasons previously of record in the Office Action mailed December 1, 2003, Pages 9-11 Paragraph 9.

6. The 35 U.S.C. 103 rejections of claims 20-21 and 23-24 over Fumel in view of Geddes and in further view of Neale are repeated for the reasons previously of record in the Office Action mailed December 1, 2003, Pages 11-14 Paragraph 10.

NEW REJECTIONS

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1-3, 7, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fumel et al (USPN 3,988,521) in view of Geddes et al (USPN 6,030,476).

Fumel et al teach an insulated beverage container stock material forming an insulated beverage container having a container wall having a side portion enclosing a beverage containing space, and having an innermost surface and an outermost surface and a bottom portion engaging said container

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wall along said side portion (see abstract and Figures 1 and 2) wherein said container wall or stock material includes a paper stock layer or first substrate (reference number 20, Figure 2 and col.2, 1.41-51) having an interior surface and an exterior surface, said exterior surface of said paper stock layer forming the outermost surface of said stock material or the outermost surface of the container wall (col.8, 1.37-50). A foam layer or high polymer layer (reference number 21, Figure 2 and col.3, 1.52-60) is disposed along the interior surface of the paper stock layer and forms the innermost surface of said container wall (col.8, 1.37-50). Sandwiched between said paper layer and said foam layer and in direct contact with said foam layer is an adhesive composition (reference number 22, Figure 2). The adhesive composition is a thin polyethylene film layer comprising a copolymer of ethylene and normal lower alpha-olefins such as propylene, butene-1, and pentene-1 (col.4, 1.45-56). Linear low-density polyethylene is a copolymer of ethylene and a lower alpha-olefin, and the specification on page 11 paragraph 46 defines the PE layer as a high, low, or linear low density polyethylene. The thickness of the paper layer is 3 to about 20 mils (col.3, 1.45-51).

Fumel et al fail to explicitly teach that the foam layer is formed from high, low, or liner low density polyethylene or

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oriented polypropylene or that a polyethylene film layer is formed on the inner surface of the foam layer. However, Geddes et al teach that although a foamed layer for heat-insulated beverage containers are formed from many different thermoplastic synthetic resins including low to medium density polymers such as polyolefins, polyvinyl chloride, polystyrene, polyester, nylon and other similar types of material, polyethylene is preferred as shown by the examples using polyethylene (col.4, l. 61-67). Furthermore, Geddes et al teaches that polystyrene foam, which is the foam used in Fumel et al is often not sufficiently smooth (col.1, l.35-37). One of ordinary skill in the art would have recognized that polyethylene foam is substituted for polystyrene foam depending on the intended end results of the foam layer.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the applicant's invention was made to substitute polyethylene foam for polystyrene foam because the polystyrene foam is insufficiently smooth and polyethylene foam is sufficiently smooth, as taught by Geddes et al.

Regarding claim 7, Fumel et al fail to explicitly teach that more than one insulating layer is added interior of the paper stock layer. However, Fumel et al teach that it is

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understood by those skilled in the art after reading the present disclosure that any number of layers of high polymer sheets or insulating sheets can be so laminated to other materials and that a wide variety of useful articles can thereby be produced (col.2, 1.36-40). Furthermore, when the extra insulating coating is the same material as the foam layer, the foam layer and insulating coating layer are the same as one thick foam layer. Fumel et al also teach that when a foam material is utilized as the high polymer sheet, its thickness can be selected to provide any desired insulating properties (col.3, 1.52-58). One of ordinary skill in the art would have recognized that another insulating coating or foam layer is added between said foam layer and said paper stock layer depending on the desired insulating properties, as taught by Fumel et al.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the applicant's invention was made to add another insulating coating or foam layer between said foam layer and said paper stock layer of Fumel et al in order to increase the insulating properties as desired, as taught by Fumel et al.

ANSWERS TO APPLICANT'S ARGUMENTS

8. Applicant's arguments regarding the 35 U.S.C. 102 rejections of claims 1-3 and 25 as anticipated by Fumel et al have been considered but are moot since the rejections have been withdrawn.

9. Applicant's arguments regarding the 35 U.S.C. 103 rejections of claims 4-6, 8-10 and 26 over Fumel in view of Geddes have been considered but they are not persuasive.

In response to Applicant's argument that Fumel and Geddes fail to teach the limitations of claim 8, Fumel teaches a laminate forming the container wall having the outermost layer of paper, and foam on the inside of the paper layer. Geddes teaches that a thin polyethylene film layer is applied to the innermost surface of a foamed paper cup container wall in order to prevent moisture penetration into the container wall. Therefore, taken as a whole Fumel and Geddes teach a container wall having a paper layer as the outermost layer, a foam layer interior of the paper layer, and a thin polyethylene film layer forming the innermost layer, which would obviously mean that the polyethylene film layer is in continuous and direct contact with the foam layer.

In response to Applicant's argument that Fumel nor Geddes teach melt extrusion or melt fusion of the foam layer to the paper stock layer, the claims limit the adherence of the foam layer to the paper stock layer by melt extrusion, lamination, or foam extrusion. Adhesive bonding is a type of lamination and therefore, Fumel and Geddes teach lamination as the means for adhering the paper to the foam layer.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., using a polyethylene film layer to extrusion adhere polyethylene or polypropylene foam to paper stock) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., polyethylene or polypropylene extruded foam or extrusion lamination) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims.

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See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

10. Applicant's arguments regarding the 35 U.S.C. 103 rejections of claim 17-19 and 27 over Fumel in view of Neale have been considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., solid polyethylene film) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

11. Applicant's arguments regarding the 35 U.S.C. 103 rejections of claims 20-21 and 23-24 over Fumel, Geddes and Neale have been considered but are not persuasive.

In response to Applicant's argument that the three references do not teach extrusion lamination of polyethylene foam to a paper substrate, regarding claims 20 and 21 lamination is claimed as a method for adhering the paper and foam layer, and adhesive bonding is a type of lamination. Regarding claim

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23, Geddes teaches that polyethylene foam is formed by extrusion, and one of ordinary skill in the art would have recognized that an extruded foam can be adhesively bonded or extruded directly onto a paper substrate and the two laminates would be functionally equivalent, absent the showing of unexpected result. Regarding claim 24, the limitations "extrusion lamination" and "polyethylene" foam are not limitations in claim 24.

In response to Applicant's argument that a foam layer and laminated layer are not functionally equivalent, first, the claims as presented have as an embodiment laminated foam, which would include adhesive lamination. Second, article claims are defined by structural limitations only and not by intermediate or process limitations. Therefore, whether or not the adhesive seams are incompatible with high-speed cup forming speeds or if organic solvents are used, do not affect the structure and function of the end result. Furthermore, there is no limitation in the claims stating that the foam is restricted from using organic solvents.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS**

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ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P Bruenjes whose telephone number is 571-272-1489. The examiner can normally be reached on Monday thru Friday from 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the

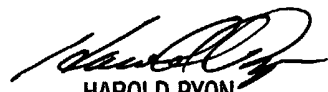
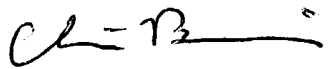
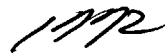
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organization where this application or proceeding is assigned is
703-872-9306.

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Christopher P Bruenjes
Examiner
Art Unit 1772

CPB
April 9, 2004


HAROLD PYON
SUPERVISORY PATENT EXAMINER


4/12/04